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### **REMARKS**

Applicants urge that no fee is required as no new claims over those previously paid for have been added through this Amendment. Should any fee be required, Applicants urge that the Commissioner charge Deposit Account 19-3550 for any such fee. No new matter has been added by these amendments.

#### **Request for Telephone Interview**

Applicants urge that this Amendment is fully responsive to the pending Office Action and that the subject U.S. patent application is allowable. Should any issue remain, Applicants urge the Examiner to contact the undersigned at 847.490.1400.

#### **Amendment to the Claims**

Claim 1 has been amended to recite a frame comprising a ferromagnetic material and providing a closed return path for a magnetic field generated by a magnet structure, as supported in Claims 7-8 and paragraph 0069. The preamble of Claim 1 has been amended to recite a low-profile transducer to correct antecedent basis issues in the dependent claims, as supported in paragraph 0018. Claim 12 has been amended for consistency with Claim 1. Claim 31 has been amended to correct a typographical error. Claim 42 has been amended to correct antecedent basis issues.

Claims 7-8, 11, 39, 44-65 and 68 have been canceled. New Claims 69-71 and 70 have been added to recite the magnet structure includes

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ferromagnetic U-shaped yoke structures with the magnet mounted close to the end of one arm of the U-shape and the diaphragm includes a skirt, as supported in Claim 31 and paragraph 0077-0081.

### **Response to Election/Restriction**

Applicants have canceled the non-elected Claims 47-63 and 68 to provide a complete reply to this Office Action.

### **Drawings Objection**

The objection of the drawings under 37 CFR § 1.83(a) as not showing the cone-type transducer of Claim 45 and the crossover of Claim 46, is respectfully traversed. Claims 45 and 46 have been canceled, rendering this rejection moot.

### **Claim Objections**

The objection of Claims 44-46 under 37 CFR § 1.75(c) as not having proper dependent form, is respectfully traversed. Applicants have canceled Claims 44-46, rendering this rejection moot.

### **Claim Rejection Based on 35 U.S.C. § 112**

The rejection of Claims 2-46 based on 35 U.S.C. § 112, second paragraph as being indefinite, is respectfully traversed. The preamble of Claim 1 has been amended to recite a low-profile transducer and correct the antecedent basis issue for the dependent Claims 2-43. Claim 42 has been amended to provide antecedent

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basis for the fin. Claims 44-46 have been canceled. Accordingly, this claim rejection should be withdrawn.

### **Claim Rejections Based on 35 U.S.C. § 102**

#### **a) Carme**

The rejection of Claims 1-4, 7-8, 13-15, 26-27, 30-32, 34-39 and 44 based on 35 U.S.C. § 102(b) as being anticipated by Carme, U.S. Patent 6,285,773, is respectfully traversed.

The Examiner cites Carme for allegedly disclosing each and every limitation of Applicants' claimed invention. Applicants respectfully disagree. Claim 1 recites a low-profile transducer having a frame comprising a ferromagnetic material to form a closed return path for the magnetic field generated by the magnetic structure as shown in Figs. 2, 8 and 10-11, for example. The closed return path improves efficiency of the magnets and the speaker. (*See* paragraph 0069 of the Specification). Only one magnet structure is needed with each voice coil since the ferromagnetic frame allows the lines of magnetic flux to span between the north and south poles of the magnet structure, for example, as shown in Fig. 2.

In contrast, Carme requires two magnet structures and does not allow the lines of flux to connect between the north and south poles of the same magnetic structure since it places one magnet on each side of the coil. Instead lines of flux go

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from the north pole of the magnet on the left to the south pole of the magnet on the right as seen in Fig. 2 of Carme.

Regarding the Examiners assertion that the frame of Carme is ferromagnetic, Carme is silent with respect to ferromagnetic, ferrous, return and metal. Furthermore, if the frame of Carme was metal, the pole part would interfere with the lines of flux between the two magnets. It is at best unclear how the speaker of Carme would function if the frame were ferromagnetic since magnetic flux from two magnets would enter the center pole part. Even if the Carme did have a ferromagnetic frame, it would not have Applicants' magnet efficiency discussed above.

Regarding new Claims 69-71, Carme is silent with respect to yoke, arm and skirt.

For at least the reasons stated above, Applicants' invention is patentably distinguished from Carme. Accordingly, this claim rejection should be withdrawn.

**b) Sawafuji**

The rejection of Claim 1 based on 35 U.S.C. § 102(b) as being anticipated by Sawafuji, U.S. Patent 4,544,805, is respectfully traversed.

The Examiner cites Sawafuji for allegedly disclosing each and every limitation of Applicants' claimed invention. Applicants respectfully disagree. Claim 1 recites a low-profile transducer having a frame comprising a ferromagnetic

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material to form a closed return path for the magnetic field generated by the magnetic structure as discussed above with respect to Carne.

In contrast, Sawafuji requires two magnet structures and does not allow the lines of flux to connect between the north and south poles of the same magnetic structure since it places one magnet on each side of the coil. Instead lines of flux go from the north pole of the magnet on the left to the south pole of the magnet on the right as seen in Fig. 4 of Sawafuji. Furthermore, the Examiner did not cite Sawafuji to reject the limitations of Claims 7-8 which are now part of Claim 1.

The magnets of Sawafuji are aligned with the poles (N to S) perpendicular to the plane of the diaphragm. In contrast, Applicants poles (N to S) are aligned substantially parallel to the plane of the diaphragm. Applicants' arrangement contributes to magnet efficiency discussed above.

Regarding new Claims 69-71, Sawafuji is silent with respect to yoke, arm and skirt.

For at least the reasons stated above, Applicants' invention is patentably distinguished from Sawafuji. Accordingly, this claim rejection should be withdrawn.

**c) Larson**

The rejection of Claims 1, 5-6, 16-25, 28-29, 40-42 and 66-67 based on 35 U.S.C. § 102(b) as being anticipated by Larson, U.S. Patent 4,536,623, is respectfully traversed.

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The Examiner cites Larson for allegedly disclosing each and every limitation of Applicants' claimed invention. Applicants respectfully disagree. Claim 1 recites a low-profile transducer having a frame comprising a ferromagnetic material to form a closed return path for the magnetic field generated by the magnetic structure as discussed above with respect to Carme.

In contrast, Larson requires two pole pieces to form a return path. The pole pieces are not Applicants' frame. Applicants' frame can be formed by stamping and other suitable processes. Applicants' low-profile transducer of Claim 1 can be assembled from fewer components (frame and magnets) than Larson since Larson requires two pole pieces for each magnet in addition to the magnets and the frame. Furthermore, the Examiner did not cite Larson to reject the limitations of Claims 7-8 which are now part of Claim 1.

Regarding the rejection of Claim 41, the Examiner asserts that the claimed list of silver, gold, aluminum, copper and mixtures thereof is inherent in Larson. (*See* Office Action page 7). Larson in column 3, lines 23-29 states that the conductors are inexpensive. Those skilled in the art generally would not consider gold conductors as inexpensive.

Regarding new Claims 69-71, Larson is silent with respect to yoke, arm and skirt.

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For at least the reasons stated above, Applicants' invention is patentably distinguished from Larson. Accordingly, this claim rejection should be withdrawn.

**d) Kato**

The rejection of Claims 1 and 9-10 based on 35 U.S.C. § 102(b) as being anticipated by Kato, U.S. Patent 6,859,544, is respectfully traversed.

Kato is not available as prior art under 35 U.S.C. § 102(b). Kato issued on 22 February 2005, published on 06 May 2004 and was filed on 30 April 2003. In contrast, Applicants' application was filed on 09 April 2004 and properly claims priority to U.S. Provisional Application 60/461,809, filed on 09 April 2003. Since Applicants' priority date is 09 April 2003, Kato is not available under 35 U.S.C. 103(e) either.

The Examiner cites Kato for allegedly disclosing each and every limitation of Applicants' claimed invention. Applicants respectfully disagree. Claim 1 recites a low-profile transducer having a frame comprising a ferromagnetic material to form a closed return path for the magnetic field generated by the magnetic structure as discussed above with respect to Carne.

In contrast, Kato discloses a bonded magnet. On page 7 of the Office Action, the Examiner lists the frame as reference numeral 2 in Fig. 5 of Kato. Reference numeral 2 is actually the bonded magnet and not Applicants' ferromagnetic

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frame. Furthermore, the Examiner did not cite Kato to reject the limitations of Claims 7-8 which are now part of Claim 1.

Regarding new Claims 69-71, Kato is silent with respect to arm and skirt.

For at least the reasons stated above, Applicants' invention is patentably distinguished from Kato. Accordingly, this claim rejection should be withdrawn.

#### **Claim Rejections Based on 35 U.S.C. § 103**

##### **a) Larson**

The rejection of Claims 11-12 and 33 based on 35 U.S.C. § 103(a) as being obvious in view of Larson is respectfully traversed. Claim 11 has been canceled. Claims 12 and 33 depend from Claim 1 and are patentable for at least the same reasons discussed above. Claim 12 no longer recites a non-ferromagnetic frame.

Regarding Claim 33, the Examiner asserts that it is known and obvious to those skilled in the art to use electromagnets for the magnet structure but that Larson does not teach or suggest this claimed limitation. Applicants respectfully disagree. Absent a showing to the contrary, the Examiner has failed to cite a reference disclosing all the limitations of Claim 33, as required for a *prima facie* case of obviousness.

Larson does not teach or suggest Applicants' claimed invention. Accordingly, this Claim rejection should be withdrawn.



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**b) Carme**

The rejection of Claims 43 and 45-46 based on 35 U.S.C. § 103(a) as being obvious in view of Carme is respectfully traversed. Claims 45-46 have been canceled. Claim 43 depends from Claim 1 and is patentable for at least the same reasons discussed above.

Regarding Claim 43, the Examiner asserts that it is known and obvious to those skilled in the art to use insulated metal wire for the voice coil. Applicants respectfully disagree. Absent a showing to the contrary, the Examiner has failed to cite a reference disclosing all the limitations of Claim 43, as required for a *prima facie* case of obviousness.

Carme does not teach or suggest Applicants' claimed invention. Accordingly, this Claim rejection should be withdrawn.

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### **Conclusion**

Applicants believe that the above Amendment addresses and overcomes each and every issue and rejection raised by the Examiner and therefore places the subject U.S. Patent Application into condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'KEDCik', written in a cursive style.

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